

3D gel invasion assay using a 3D microfluidic cell culture chip

 Akira Kikuchi  Akikazu Harada

Updated date: Nov 30, 2021

 An abbreviated version of this protocol was published in eLIFE in Sep 2021

Localization of KRAS downstream target ARL4C to invasive pseudopods accelerates pancreatic cancer cell invasion

DOI: 10.7554/eLife.66721

Detailed protocol

Dear Dina,

Thank you for reading our paper and for your interest in our 3D gel invasion assay.

We have posted the detailed procedure of the assay to "Bio-protocol.", which was prepared by Akikazu Harada (the first author of this paper).

Please see it for our method and also check the manufacturer's website of the 3D cell culture chip (AIM Biotech).

The links are attached below.

http://aimbiotech.com/wp-content/uploads/2021/02/general_protocol_v5.4.pdf

<http://aimbiotech.com/wp-content/uploads/2021/02/cellmigration-v2.2.pdf>

The relevant part of the user's manual is indicated in "Bio-protocol."

We used MDA-MB-231 breast cancer cells as a positive control.

The steps of filling collagen gel and seeding cells might be a little bit difficult.

Adjusting injection pressure might help you.

If you need more information about our protocol, please don't hesitate to contact us Akira Kikuchi (akikuchi@molbiobc.med.osaka-u.ac.jp) and Akikazu Harada (aharada@molbiobc.med.osaka-u.ac.jp).

We wish you good luck with your research.

Best regards,

Akira

Akira Kikuchi

Related files

 Bio-protocol.docx



How to cite: (Readers should cite both the Bio-protocol preprint and the original research article where this protocol was used)

1. Kikuchi, A. and Harada, A. (2021). 3D gel invasion assay using a 3D microfluidic cell culture chip. Bio-protocol Preprint. bio-protocol.org/prep1458.
2. Harada, A., Matsumoto, S., Yasumizu, Y., Shojima, K., Akama, T., Eguchi, H. and Kikuchi, A. (2021). Localization of KRAS downstream target ARL4C to invasive pseudopods accelerates pancreatic cancer cell invasion. eLIFE. DOI: [10.7554/eLife.66721](https://doi.org/10.7554/eLife.66721)

Copyright: Content may be subjected to copyright.